

Title (en)

Ultrahigh strength welded steel pipe excellent in cold cracking resistance of weld metal and method of producing it

Title (de)

Geschweisstes Rohr aus ultrahochfestem Stahl mit verbesserter Beständigkeit gegen Wasserstoffversprödung und Verfahren zur Herstellung des Rohres

Title (fr)

Tuyau en acier soudé à très haute résistance, la soudure ayant une résistance améliorée à la fissuration à froid et sa méthode de fabrication

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Application

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Abstract (en)

The present invention, in a welded joint of steel sheets and a steel pipe body having a tensile strength of 800 MPa or more (over X100 in API Standards), provides: the welded joint of the steel sheets and the steel pipe produced by forming a steel sheet into a cylindrical shape and welding both the ends thereof, both excellent in cold cracking resistance; and methods for producing them. The present invention includes an ultrahigh strength welded joint and an ultrahigh strength welded steel pipe excellent in the cold cracking resistance of a weld metal, characterized in that the amount of nondiffusible hydrogen in the inner side weld metal is 0.01 ppm or more. It is preferable that the ratio of the nondiffusible hydrogen amount to the total hydrogen amount in said inner side weld metal is 0.5% or more. Further, it is preferable that Mo carbide is contained by not less than 1 piece/ μm^2 in said inner side weld metal. The present invention also includes a method for producing said welded joint and welded steel pipe, characterized by welding the butted portion from the inner side and thereafter welding it from the outer side so that the reheating temperature of the inner side weld metal may reach within the range from 500 DEG C to 700 DEG C. <IMAGE>

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IPC 8 full level

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